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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,512	02/04/2005	Roland Liebe	2002P13083WOUS	1290

7590 11/19/2007  
Siemens Corporation  
Intellectual Property Department  
170 Wood Avenue South  
Iselin, NJ 08830

EXAMINER
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DINH, TIEN QUANG

ART UNIT	PAPER NUMBER
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3644

MAIL DATE	DELIVERY MODE
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11/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,512	<b>Applicant(s)</b> LIEBE ET AL.	
	<b>Examiner</b> Tien Dinh	<b>Art Unit</b> 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 26,27,30,31,33 and 43-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26,27,30,31,33 and 43-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/07</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 26, it is claimed that the profiles oscillate in countersynchronism. The examiner believed that this might be a translation error. Countersynchronism essentially means not simultaneously. However, it has been described and shown in figure 2C that countersynchronism seems to mean the profiles can move in the opposite directions. Please explain.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26, 27, 30, 31, 33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Darkin Industries EP 517249.

Art Unit: 3644

Darkin discloses a device having profiles 4 that are arranged in a duct 101 where the flow medium flows around the profiles, an external drive 10 that communicates with the profiles to provide the profile with periodic translational movement back and forth along an axis perpendicular to the flow direction axis. This axis is aligned with parts 9 as seen in figures 2-6. This makes the profiles 4 move back and forth along the parts 9. The crank 9 allows pivoting movement of the profiles that result from a rotation of the profile about an axis of rotation. The axis of rotation is the axis that is aligned with the crank. This allows the formation of the angle  $\theta$  with respect to the flow. Darkin teaches the profiles that has axis of rotation being parallel to each other (see figures 8, 10, 11), but seems silent on the angular frequency  $\omega$  and countersynchronism. However, clearly shown in figures 8-11, the two profiles, which are connected to their own respective drive 10, are capable of oscillating with the same angular frequency and in countersynchronism. Figure 8 shows the profile in countersynchronism. In an event, one skilled in the art could operate the drives 10 with the same frequency in Darkin's system to allow certain flows in the duct. See figures 19, 22, 27-28 also for the countersynchronism.

The profiles provide finite edge vortices along the trailing edge.

Re claim 27, the external drive comprises of a first drive is element 5, 7, and/or 8. The second drive is element is 6.

Re claim 30, the second profile is clearly shown in figures 8-11.

Re claim 31, the device has profiles shown in figures 9 that are in the same phase and frequency.

Re claim 33, one skilled in the art would have used the device in a gas turbine to yield the predictable result of better airflow to the engine to increase its efficiency. The examiner also takes official notice that gas turbines are well known in this day and age.

Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim 4667900 in view of Withold Eisner et al (GT-2002-30234, as disclosed in the IDS) and/or Raisbeck 4844382.

Kim teaches a device that has profiles/vanes 19 that are in front of the row of moving blades that are inherently inside the engine 1. The vanes 19 are rotatable with respect to the part 18. The vanes are moved by actuators/external drive. See column 5, lines 40-41. Kim is silent on the row of stationary vanes arranged offset from a projected path of vortices generated by the profiles. However, Eisner et al teaches that stationary vanes are well known to be placed behind periodic upstream wakes that can be produced by the profiles. Raisbeck is also used to show that stationary vanes 23 upstream of an engine is well known also.

It would have been obvious to one skilled in the art at the time the invention was made to have used stationary vanes downstream of profiles in Kim's system as taught by Eisner et al and/Raisbeck to have a more efficient airflow to the engine for increase fuel economy and more horsepower.

Re claim 44, the examiner take official notice that connecting rods are well known and one skilled in the art would have used such devices as a more efficient actuator system.

Re claim 45, the respective stationary member is the outer structural member of the engine that is adjacent to the vanes. This can be clearly seen in figure 7.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hasinger et al teaches stationary part 16,

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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